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HOUSEHOLD CALENDAR.

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U. S. Department of Agriculture

A radio talk by Mrs. Rowena Schmidt Carpenter, assistant to the chief, Bureau of Home Economics, delivered through WRC and 37 other radio stations associated with the National Broadcasting Company, Thursday, July 31, 1930.

MRS. CARPENTER:

How do you do, Homemakers:

As I promised you last week, Miss Mabel Stienbarger is with me today to answer a number of the canning questions you have been asking in your letters. Miss Stienbarger knows first hand about home canning problems because of the experimental work she is doing just now in the Bureau of Home Economics.

First, I shall ask Miss Stienbarger the canning question that comes to us most often:- Is a wash boiler equipped with a rack all right for canning? What would you say, Miss Stienbarger?

MISS STIENBARGER:

That depends on what the homemaker wants to can, Mrs. Carpenter. Some foods require more heat to sterilize them than others -- that is, to destroy the bacteria that cause spoilage. A water bath canner of which the wash boiler is an example, never gets hotter than the temperature of boiling water, 212 degrees Fahrenheit. Acid foods, for instance tomatoes and fruits, can be sterilized at the boiling temperature in less than an hour, which is not so long that flavor and texture are greatly changed. But foods that are not acid such as meats and most vegetables would have to be heated a good many hours in a water bath canner to make sure they were sterilized, some as long as 6 hours and some even longer. In the meantime flavor, texture, and perhaps color would be greatly changed, and some of the important vitamins destroyed. So, if this homemaker expects to can only fruits and tomatoes, the water bath canner is perfectly satisfactory.

MRS. CARPENTER:

I see, Miss Stienbarger, but she asks also for our directions for canning string beans.

MISS STIENBARGER:

Well of course we do not recommend the water bath canner for string beans and other non acid foods, so we must send her directions for using the pressure canner.

MRS. CARPENTER:

But so many homemakers do not have a pressure canner. Won't you go over its advantages, that is, the reasons we feel so strongly in the Department of Agriculture about the advisability of using a pressure canner?

(over)

MISS STIENBARGER:

It all hinges on this question of temperature. Steam under pressure is much hotter than boiling water. The temperature increases with the pressure. For instance, at 10 lbs. pressure the temperature is 240 degrees Fahrenheit. Jars or cans of food in a steam pressure canner get much hotter, therefore, than in a water bath canner, and so the length of time of processing is very much shortened. At the same time the product is more surely sterilized because even the bacteria that are hardest to destroy cannot survive such heat.

MRS. CARPENTER:

Is there any reason why we should be especially concerned about these bacteria, except for the fact they may cause the loss of canned food, Miss Stienbarger?

MISS STIENBARGER:

Yes, there is a very important reason. One kind of bacteria known as Bacillus Botulinus produces a very poisonous material in the foods it attacks. Many fatal cases of food poisoning have been traced to Botulinus toxin. High temperatures such as those obtained in a pressure canner destroy botulinus bacteria.

MRS. CARPENTER:

Is there any way to tell if the botulinus poison is present in a jar of food?

MISS STEINBARGER:

Unfortunately, it is sometimes hard to tell when botulinus toxin is present. However, boiling does destroy the toxin. For this reason as a safeguard all canned meats and vegetables should be boiled at least ten minutes after they are taken from the can. It is very important to take this precaution before tasting these foods.

MRS. CARPENTER:

How long must food be sterilized in the pressure canner to make sure that botulinus and other bacteria that cause spoilage are destroyed?

MISS STIENBARGER:

That depends on the kind of food and on the amount of pressure, or in other words, the temperature inside of the canner. Anyone asking that question should be sent our time tables for canning.

MRS. CARPENTER:

Many homemakers are hearing about oven canning just now and want to know if it is as safe as pressure canning.

MISS STIENBARGER:

No, it is not, Mrs. Carpenter. It is all right for tomatoes and fruits; that is, it is similar to water bath canning. The material in the jars or cans does not get hotter than boiling.

MRS. CARPENTER:

Not even when the oven is heated to 250 degrees Fahrenheit or higher?

MISS STIENBARGER:

No. The temperature of the air in the oven may be heated as high as 275 degrees Fahrenheit for canning, and yet since the jars are not surrounded by high pressure, the steam formed in them escapes and only the boiling temperature is maintained in their contents.

MRS. CARPENTER:

Then you would not advise processing non-acid vegetables and meats in the oven, Miss Stienbarger?

MISS STIENBARGER:

No, there is the same risk as in water bath canning of these products.

MRS. CARPENTER:

We are still having many requests for cold pack canning directions. Will you explain why we now advise the hot pack method, and tell us just what the term means?

MISS STIENBARGER:

The term just about describes itself. The food is packed into the jar or can while boiling hot. For most products five minutes of preliminary cooking in a kettle is sufficient to heat the products through and to wilt and shrink them. There are two decided advantages. Shrinking outside of the jar makes a full pack possible without cramming. The heat of the canner penetrates to the inside of the hot food more quickly than was possible in the former cold pack method. Our canning bulletin gives directions for the hot pack method.

MRS. CARPENTER:

One more question and then we must stop:- Will you tell us about lacquered or enameled tin cans for home use?

(over)

MISS STIENBARGER:

All right. There are two kinds:- One is lined with a bright gold enamel, and is used for foods that fade badly such as red berries, cherries and beets; and also for pumpkin. The other has a dull gold enamel lining which prevents the discoloration of corn, shrimp, and clams.

MRS. CARPENTER:

Thank you, Miss Stienbarger, for your very helpful explanations. I know that many of our friends of the Farm and Home Hour will want to send for Farmers' Bulletin No. 1471-F, "Canning Fruits and Vegetables at Home," in which the time tables and much other information on home canning is found. And now goodbye Homemakers, until next Thursday when Mrs. Yeatman will give you the benefit of her experience in putting up jams, marmalades, fruit butters, and the like.

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